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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,358

12/01/2003

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1793.1093

8082

21171 7590 05/11/2009
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EXAMINER

KIM, WESLEY LEO

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

05/11/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/724,358	Applicant(s) CHOI ET AL.	
	Examiner WESLEY L. KIM	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 11/6/06 and 9/27/07 have been considered by the examiner.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:
 - Claim 13 recites "A machine readable storage", however the specification does not teach of any "machine readable storage". Claims 14-19, which are dependent on Claim 13 recite "The storage", which also is not supported since the "The storage" appears to have antecedent basis to "A machine readable storage".

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 3-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was

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not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- Claim 3 recites “the request for multimedia resource specifies a method of transmitting an acknowledgement signal”. However the limitation is not enabled by the specification. The closest teachings are discussed below.
 - i. Par.59 of the specification indicates that an mPCF can operate in a handshaking ACK and in a burst ACK manner but the specification doesn’t teach “the request for multimedia resource specifies a method of transmitting an acknowledgement signal”.
 - ii. Par.41 of the specification teaches that an adjuster 740 adjusts a control parameter 750, such as ACK protocol specification, based on received control information on resources from a predetermined device at an early stage of an mPCF period. However this is not the same as “the request for multimedia resource specifies a method of transmitting an acknowledgement signal” since the ACK protocol specification is specified during an early stage of an mPCF period, it is not specified in a request for multimedia resource as recited in Claim 3. Further from Claim 1 it is clear that a request for multimedia resource occurs during a DCF period.
- Claim 4 is rejected under 35 U.S.C 112 first paragraph as being dependent upon the rejected Independent Claim 3.

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- If the examiner is incorrect, Please clearly point out where in the specification support can be found for this limitation.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 5, 7, 9, 11-14, 17-20, and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Gubbi et al (WO 01/71981 A1: Provided in IDS).

Regarding Claims 1, 13, 20, Gubbi teaches transmitting multimedia data over a wireless local area network (WLAN) (Page 12: Paragraph under “2. PCF as multimedia transport functionality” and Page 18: Paragraph under section 5 and 5.1 and Page 34), the method comprising: receiving a request for a multimedia resource from a predetermined requesting device connected to the WLAN (Page 34: section 5.2.5.1, Page 19, third and fifth bullets and Page 20: first bullet, MMS sends a request and is received by PC (which is just an MMS designated as a PC) which allocates a time slot in the CFP. The device requesting resource is part of the network and is the predetermined device), during a distributed coordination function (DCF) period when a right to use a network channel is distributed through contention (Page 19: third bullet, establishing connections and negotiate for bandwidth in the contention period using DCF mechanisms); and unilaterally transmitting the requested multimedia resource (Page 18: Paragraph under section 5 and 5.1 and

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Page 20: bullet 3, allocating transmission slots to stations is transmitting the multimedia resource unilaterally (i.e. to the MMS)) to the predetermined receiving device during a multimedia point coordination function (mPCF) period (Page 19: fifth bullet, mPCF is PCF) when a right to use a network channel is distributed to the predetermined requesting device in a centralized manner (Page 18: Paragraph under section 5 and 5.1 and Page 20: bullet 3, PC controls allocating transmission slots to stations, by the PC controlling distribution that is centralized).

Regarding Claim 5, Gubbi teaches transmitting multimedia data over a wireless local area network (WLAN)(Page 12: “2. PCF as multimedia transport functionality” and Page 18: Paragraph under section 5 and 5.1 and Page 34), the method comprising: receiving a request for a multimedia resource from a predetermined requesting device connected to the WLAN (Page 19, third and fifth bullets and Page 20 and Page 34: section 5.2.5.1: third bullet, MMS sends a request and is received by PC which allocates a time slot in the CFP); scheduling the received request for the multimedia resource (Page 20, third bullet, PC allocates (i.e. schedules) transmission slots); and transmitting the requested multimedia resource to the predetermined requesting device during a multimedia point coordination function (mPCF) period based on the scheduling (Page 20, third bullet and Page 34: section 5.2.5.1, PC will transmit during CFP (i.e. mPCF) according to allocated slots (i.e. scheduling)).

Regarding Claim 11, the limitations of Claim 11 encompass all of the limitations of Claim 5, so the rejection of Claim 5 will be incorporated into the

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rejection of Claim 11. Gubbi further teaches dynamically allotting a predetermined length of a multimedia point coordination function period, during which the requested multimedia resource will be transmitted according to an amount of the requested multimedia resource (Page 20, third and fourth bullet, CFP is the point coordination function (PCF) period and slot duration (i.e. length) is allotted to the user upon request, i.e. dynamic).

Regarding Claim 12, Gubbi teaches guaranteeing a full length of a point coordination function (PCF) period in a wireless local area network (WLAN), the method comprising: monitoring a distributed coordination function (DCF) beacon delay; and adjusting a PCF period value, if the DCF beacon delay occurs according to the monitoring (Page 28: second and third bullets, DCF beacon delay (i.e. beacon delay) causes the PC to adjust PCF (i.e. CFP) period).

Regarding Claim 22, the limitations of Claim 1 encompass all of the limitations of Claim 22, so the rejection of Claim 1 will be incorporated into the rejection of Claim 22. Gubbi further teaches a plurality of WLAN computing stations (Pg.36: section 5.2.5.2, "all MMSs", MMSs are computing stations) and home server on the WLAN (Page 18, Paragraph under Section 5, home environment means a WLAN in a home and Page 19: section 5.1.2.1, "A PC is also an MMS", the PC is the home server).

Regarding Claims 2 and 7, Gubbi teaches the unilateral transmitting during the mPCF comprises determining how much of the requested multimedia resource will be transmitted (Page 34:section 5.2.5.1, "If an MMS requests more bandwidth

than is currently available, the the MMS is allocated only the available bandwidth", bandwidth allocation is a determination of how much of the requested resource will be transmitted) and determining a transmission schedule depending upon a type of the requested multimedia resource (Page 17: lines 1-4 and Page 28: section 5.2.2, and Page 31: section 5.2.3, depending on the type of data there are different latency requirements of the two data types, different latency means there is different scheduling/allocation).

Regarding Claims 9 and 17, Gubbi teaches in the scheduling, if there is no available network band for the requested multimedia resource, a request for allocation of a network band to the requested multimedia resource is denied (Page 34: last 3 lines – Page 35: lines 1-2).

Regarding Claim 14, Gubbi teaches the multimedia point coordinator process further comprises scheduling the received request for the multimedia resource and transmitting the requested multimedia resource to the predetermined requesting device during the mPCF period according to the scheduling (Page 17: lines 1-4 and Page 28: section 5.2.2, and Page 31: section 5.2.3, the PC allocates (i.e. schedules) and transmits requested multimedia resources according to scheduling).

Regarding Claim 18, Gubbi teaches the scheduling comprises dynamically allotting a predetermined length of the mPCF period, during which the requested multimedia resource will be transmitted, according to an amount of the requested multimedia resource (Page 28: third bullet, the PC adjust PCF (i.e. CFP) period).

Regarding Claim 19, Gubbi teaches the multimedia point coordinator process further comprises monitoring a DCF beacon delay and adjusting an mPCF period value according to the monitoring, if the monitoring determines a DCF beacon delay occurrence (Page 28: second and third bullets, DCF beacon delay (i.e. beacon delay) causes the PC to adjust PCF (i.e. CFP) period).

Regarding Claim 23, Gubbi teaches the WLAN computing stations are any one of standard television stations, standard high definition television stations, personal computers, and computing appliances (Page 5: last paragraph).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gubbi et al (WO 01/71981 A1) in view of Mandato (US 2002/0010771 A1).

Regarding Claim 6, Gubbi teaches all the limitations as recited in Claim 5, however **Gubbi does not expressly teach** determining how much of the requested multimedia resource will be transmitted depending upon a type of the requested multimedia resource.

Mandato teaches determining how much of the requested multimedia resource will be transmitted depending upon a type of the requested multimedia resource (Table 1, paragraph next to Term “Integrated Services, IntServ”). Therefore

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it would have been obvious to modify Gubbi with Mandato at the time of the invention to provide efficiently manage resources so that QOS levels are met for the various types of multimedia resources.

9. Claims 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gubbi et al (WO 01/71981 A1) in view of Blair et al (US 2002/0069244 A1).

Regarding Claim 15, Gubbi teaches the scheduling determines how much of the requested multimedia resource will be transmitted or determines a transmission schedule of the requested multimedia resource, according to a type of the requested multimedia resource by referring to a **stored priority table** (Page 17: lines 1-4 and Page 28: section 5.2.2, and Page 31: section 5.2.3, depending on the type of data there are different latency requirements of the two data types, different latency means there is different scheduling/allocation), however **Gubbi does not teach a stored priority table**.

Blair teaches that a user can assign high priority to certain data and the high priority data gets delivered first (Par.72, the priority must be stored in a table).

Therefore it would have been obvious to modify Gubbi with Blair at the time of the invention to provide a method to ensure quality of service levels where the users are provided with the most desired data before receiving any other data.

Regarding Claim 24, Gubbi teaches all the limitations as recited in Claim 22 and Gubbi further teaches the programmed computer processor schedules the unilateral transmitting according to the set priority level (Page 31, Last paragraph)

however **Gubbi does not expressly teach** presents a user interface to set a priority level of a type of the multimedia resource.

Blair teaches that it is a well known concept in the art for a user to assign priority to data (Par.72, it is obvious that the assignment must be done via a user interface). Therefore it would have been obvious to modify Gubbi with Blair at the time of the invention to provide a method to ensure quality of service levels where the users are provided with the most desired data before receiving any other data.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gubbi et al (WO 01/71981 A1) in view of Bendinelli et al (US 6061719).

Regarding Claim 21, Gubbi teaches all the limitations as recited in Claim 20 and further teaches of multimedia resources however **Gubbi does not expressly teach** multimedia resource to be high definition television level data from one of internet, satellite, antenna and cable.

Bendinelli teaches that it is well known in the art that multimedia resource to be high definition television level data from one of internet, satellite, antenna and cable (Col.3:lines 1-12). Therefore it would have been obvious to modify Gubbi with Bendinelli to provide a method where users may be provided with high quality entertainment at the luxury of their own home.

11. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gubbi et al (WO 01/71981 A1) in view of Vaid et al (US 6502131 B1).

Regarding Claims 8 and 16, Gubbi teaches all the limitations as recited in Claim 7 and 15, however **Gubbi does not expressly teach** control data ranks first

in terms of priority, followed by motion picture experts group (MPEG) data and video on demand data.

Vaid teaches that it is well known in the art that control traffic (i.e. session establishment) is assigned the highest priority and then video (i.e. MPEG and video on demand) (Col.16:lines 7-20). Therefore it would have been obvious to modify Gubbi with Vaid so that the multimedia data may be efficiently delivered to the requesting users based on the control data/traffic such as session establishment or routing data.

12. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gubbi et al (WO 01/71981 A1) in view of Mugica et al (US 2003/0016668 A1).

Regarding Claims 3, Gubbi teaches all the limitations as recited in Claim 1, however **Gubbi does not expressly teach** the request for multimedia resource specifies a method of transmitting an acknowledgement signal, and the unilateral transmitting transmits the requested multimedia resource according to the method of transmitting the acknowledgement signal.

Mugica teaches that it is well known in the art that the request for multimedia resource specifies a method of transmitting an acknowledgement signal (Page 6, Column 1: lines 3-7, acknowledgement packet is encapsulated in a protocol packet used by the destination node, it is obvious that a message sent from the destination node includes some indication of the protocol to use), and the unilateral transmitting transmits the requested multimedia resource according to the method of transmitting the acknowledgement signal (Page 6, Column 1: lines 3-7, clearly the transmission

occurs according to the acknowledgement). Therefore, to one of ordinary skill in the art, it would have been obvious to modify Gubbi with Mugica at the time of the invention to ensure all information is delivered to the destination (i.e. maintaining quality of service) by using acknowledgements in such a way that any undelivered or error riddled information can be resent.

Regarding Claim 4, Mugica teaches receiving the acknowledgement signal from the predetermined requesting device for each multimedia resource data unilaterally transmitted to the predetermined requesting device, if the method of transmitting the acknowledgement signal is a data acknowledgement transmission method (Page 6, Col.1:lines 3-7, ACK is sent for each multimedia resource data), and receiving an acknowledgement signal from the predetermined requesting device for every predetermined number of multimedia resource data unilaterally transmitted to the predetermined requesting device, if the method of transmitting the acknowledgement signal is burst acknowledgement transmission method (Page 6, Col.1:lines 3-7, ACK is sent for each multimedia resource data).

13. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gubbi et al (WO 01/71981 A1) in view of Applicants Admitted Prior Art (10/724358: hereinafter AAPA).

Regarding Claim 10, Gubbi teaches all the limitations as recited in Claim 9, however **Gubbi does not expressly teach** the requested multimedia resource that is denied band allocation, is transmitted during a distributed coordination function (DCF) period.

Applicants Admitted Prior Art teaches that it is well known in the art that when a CFP is over then the PC gives control back to the stations to allow the stations to contend for access to the network (Par.12). It is obvious that if there are no available network band during the mPCF as taught by Gubbi then the PC would give control back to the stations to contend for the request multimedia resource during a DCF period so that the resource may somehow be transmitted to the requesting station so that the user is not cut-off. Therefore it would have been obvious to modify Gubbi with AAPA to provide a "best effort" attempt at providing resources to a user where if one method does not succeed then alternative methods are used in an attempt to maintain a decent level of quality of service (QOS).

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WESLEY L. KIM whose telephone number is (571)272-7867. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

/Wesley L Kim/
Examiner, Art Unit 2617